AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-20. (Cancelled).

Claim 21. (Previously Presented) An information management method for cell search in a mobile communications system comprising:

a capturing step of capturing, in a handover-source base station, phase difference information between a long period spreading code of a common control channel from said handover-source base station and a long period spreading code of a common control channel from a handover-destination base station, the phase difference information being calculated by at least one mobile station that is communicating with said handover-source base station;

a storing step of storing, in said handover- source base station and/or its control station, the captured phase difference information; and

a transmitting step of transmitting the stored phase difference information to a mobile station.

Claim 22. (Previously Presented) An information management method for cell search in a mobile communications system comprising:

a capturing step of capturing, in a handover-source base station, phase difference information between a long period spreading code of a common control channel from said handover-source base station and a long period spreading code of a common control channel from a handover-destination base station, the phase difference information being calculated by at least one mobile station that is communicating with said handover-source base station; and

a storing step of storing, in said handover-source base station and/or its control station, the captured phase difference information,

wherein said storing step stores, in said handover-source base station and/or its control station, an average of a plurality of pieces of the phase difference information between the long period spreading code of the common control channel from said handover-source base station and the long period spreading code of the common control channel from said handover-destination base station, the plurality of pieces of the phase difference information being captured from a plurality of mobile stations that are communicating with said handover-source base station.

Claim 23. (Previously Presented) The information management method for cell search in a mobile communications system as claimed in claim 21, further comprising:

a supplying step of supplying, from a control station that stores the phase difference information to said base station, the phase difference information between said base station and its neighboring base stations from among the phase difference information stored.

Claim 24. (Previously Presented) A cell search method of a mobile station comprising:

a receiving step of receiving, from a base station, phase difference information between a long period spreading code of a common control channel of said base station and a long period spreading code of a common control channel of a neighboring base station of said base station; and

a cell search step of carrying out cell search in accordance with the received phase difference information.

Claim 25. (Previously Presented) The cell search method of a mobile station as claimed in claim 24, wherein the cell search step carries out the cell search within a fixed time range in accordance with the received phase difference information.

Claim 26. (Original) A base station comprising:

storing means for storing phase difference information between a long period spreading code of a common control channel of said base station and a long period spreading code of a common control channel of a neighboring base station of said base station, the phase difference information being captured from a mobile station; and

management means for managing the phase difference information stored in said storing means.

Claim 27. (Original) A base station comprising:

storing means for storing phase difference information between a long period spreading code of a common control channel of said base station and a long period spreading code of a common control channel of a neighboring base station of said base station, the phase difference information being supplied from a control station of said base station; and

management means for managing the phase difference information stored in said storing means.

Claim 28. (Original) A control station comprising:

storing means for storing phase difference information between a long period spreading code of a common control channel of a base station controlled by said control station and a long period spreading code of a common control channel of a neighboring base station of said base station, the phase difference information being captured from said base station it controls; and

management means for managing the phase difference information stored in said storing means.

Claim 29. (Original) A mobile station comprising:

phase difference information storing means for storing phase difference information between a long period spreading code of a common control channel of a base station and a long period spreading code of a common control channel of a neighboring base station of said base station, the phase difference information being captured from said base station; and

cell search means for carrying out cell search in accordance with the phase difference information stored in said storing means.

Claim 30. (Original) The mobile station as claimed in claim 29, further comprising:

first long period spreading code type storing means for storing types of long period spreading codes of a predetermined number of base stations to be subjected to the cell search, said mobile station being notified of the types from said base station;

second long period spreading code type storing means for storing types of long period spreading codes of the base stations to be subjected to the cell search, the types corresponding to the phase difference information, and said mobile station being notified of the types from said base station; and

comparing means for comparing information stored in said first long period spreading code type storing means with information stored in said second long period spreading code type storing means,

wherein said cell search means carries out the cell search in accordance with the phase difference information in response to a compared result by said comparing means.

Claim 31. (Original) A mobile communications system including a base station and a mobile station,

said base station comprising:

base station storing means for storing phase difference information between a long period spreading code of a common control channel of said base station and a long period spreading code of a common control channel of a neighboring base station of said base station, the phase difference information being captured from said mobile station; and

management means for managing the phase difference information stored in said storing means, and

said mobile station comprising:

mobile station storing means for storing the phase difference information captured from said base station; and

cell search means for carrying out cell search in accordance with the phase difference information stored in said mobile station storing means.

Claim 32. (Original) A mobile communications system including a base station, a control station for controlling the base station, and a mobile station,

said control station comprising:

control station storing means for storing phase difference information between a long period spreading code of a common control channel of said base station and a long period spreading code of a common control channel of a neighboring base station of said base station, the phase difference information being captured from said base station; and

control station management means for managing the phase difference information stored in said control station storing means,

said base station comprising:

base station storing means for storing the phase difference information supplied from said control station; and

base station management means for managing the phase difference information stored in said base station storing means, and

said mobile station comprising:

mobile station storing means for storing the phase difference information captured from said base station; and

cell search means for carrying out cell search in accordance with the phase difference information stored in said mobile station storing means.

Claim 33. (Previously Presented) The information management method for cell search in a mobile communications system as claimed in claim 22, further comprising:

a supplying step of supplying, from a control station that stores the phase difference information to said base station, the phase difference information between said base station and its neighboring base stations from among the phase difference information stored.

Claim 34. (New) An information management method for cell search m a mobile communications system comprising:

a capturing step of capturing, in a handover-source base station~ phase difference information between a long period spreading code of a common control channel from said handover-source base station and a long period spreading code of a common control channel from a handover-destination base station~ the phase difference information being calculated by at least one mobile station that is communicating with said handover-source base station; and

a storing step of storing, in said handover-source base station and/or its control station, the captured phase difference information,

wherein said storing step stores, in said handover-source base station and/or its control station, a value generated statistically from_a plurality of pieces of the phase difference information between the long period spreading code of the common control channel from said handover-source base station and the long period spreading code of the common control channel from said handover-destination base station, the plurality of pieces of the phase difference information being captured from a plurality of mobile stations that are communicating with said handover-source base station.